

Fact Sheet



For Final Minor Modification Permitting Action Under 45CSR30 and Title V of the Clean Air Act

This Fact Sheet serves to address the changes specific to this Minor Modification, and shall be considered a supplement to the Fact Sheet corresponding with the Title V operating permit issued on November 1, 2013.

Permit Number: **R30-01100007-2013**
Application Received: **October 27, 2014**
Plant Identification Number: **03-54-011-00007**
Permittee: **Huntington Alloys Corporation**
Mailing Address: **3200 Riverside Drive, Huntington, WV 25705**

Permit Action Number: *MM02* Revised: *May 19, 2015*

Physical Location: Huntington, Cabell County, West Virginia
UTM Coordinates: 379.2 km Easting • 4252.30 km Northing • Zone 17
Directions: Interstate 64W to 29th Street Exit, go towards Huntington on Route 60 to the Washington Blvd intersection. Make a right and go across Washington Blvd bridge. Right turn on Riverside Drive. Enter plant through Main Gate.

Facility Description

Huntington Alloys Corporation is a large rolling mill devoted exclusively to the production of wrought nickel and high nickel alloy products utilizing melting and remelting of metals to produce alloy ingots, hot and cold rolling, forging, machining, grinding, shot blasting, pickling, annealing, and ancillary testing and by-product recovery operations.

Proposed Modification

The permittee proposes to install a 15.2 MMBtu/hr, natural gas-fired "Aging and Annealing Tip-up Furnace" (Emission Unit MA-5-P) in their existing machine shop building. The 50-ft. long furnace will process rod and bar at 30,000 pounds per hour. Support equipment to be installed with the furnace include a quench tank and manipulator.

Emissions Summary

The potential emissions changes associated with the previous modification (MM01) and this proposed modification (MM02) are given in the following table. Data for the renewal permit and minor modification MM01 are from the respective fact sheets for each action. The information for MM02 is from the Engineering Evaluation for NSR permit R13-1646A. The information submitted by the permittee in application Attachment S utilized emission factors from an outdated version of AP-42. The NSR permit writer had the permittee calculate and resubmit the potential emissions based upon current emission factors. All units in the following table are in tons per year (tpy).

Pollutant	Renewal	ΔMM01	ΔMM02	Proposed
CO	177.23	0	+5.33	182.56
NO _x	630.55	0	+6.34	636.89
PM ₁₀	1,092.56	+0.2	+0.48	1,093.24
SO ₂	4.18	0	+0.04	4.22
VOC	53.5	0	+0.35	53.85
Nickel	190.78	0	N/A	190.78
Chromium	56.01	0	N/A	56.01
Hydrochloric Acid	20	0	N/A	20
Hexane	5.8	0	N/A	5.8
Total HAPs	272.59	+0.02	+0.12	272.73

N/A - Not available

Title V Program Applicability Basis

With the proposed changes associated with this modification, this facility maintains the potential to emit 182.56 tons per year of CO, 636.89 tons per year of NO_x, 1,093.24 tons per year of PM₁₀, 190.78 tons per year of nickel, 56.01 tons per year of chromium, 20 tons per year of hydrochloric acid, and 272.73 tons per year of aggregate HAPs. Due to this facility's potential to emit over 100 tons per year of criteria pollutants, over 10 tons per year of a single HAP, and over 25 tons per year of aggregate HAPs, Huntington Alloys Corporation is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

The modification to this facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR7	Particulate Matter limits
	45CSR10	Emission of Sulfur Oxides
	45CSR13	Construction Permits
	45CSR30	Operating permit requirement.

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

The following is the only permit related to this modification:

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit (<i>if any</i>)
R13-1646A	March 5, 2015	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table," which may be downloaded from DAQ's website.

Determinations and Justifications

45CSR7 – To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations. The new natural gas-fired O'Brien and Gere 50' tip-up furnace (Em. Unit ID: MA-5-P) is considered a "source operation" of Type 'b' as defined in 45CSR§§7-2.38. and 2.39.b. As such, the source is subject to the 20% opacity and PM mass rate limitations prescribed by 45CSR§§7-3.1. and 4.1. According to the application Attachment L, the process weight rate for the new furnace is 30,000 lb/hr. Using this information for a Type 'b' source, the mass rate emission limit from Table 45-7A is 22 lb/hr. The PM emission limit is 0.11 lb/hr in 4.1.1. of R13-1646A. Therefore, compliance with the NSR permit limit ensures compliance with 45CSR§7-4.1. in permit condition 5.1.4.

45CSR10 – To Prevent and Control Air Pollution from the Emission of Sulfur Oxides. The purpose of this rule is to prevent and control air pollution from the emission of sulfur oxides (45CSR§10-1.1.a.). 45CSR§10-3 establishes weight emission standards for SO₂ for fuel burning units. For the purposes of this rule, a "Fuel Burning Unit" includes any furnace that combusts fuel to provide heat by indirect heat transfer (45CSR§10-2.8.). An "Indirect Heat Exchanger" is a device that heats any heat transfer medium (45CSR§10-2.9.). According to the application Attachment L, rather than utilizing a heat transfer medium, the natural gas-fired burners fire directly on the load in the furnace to accomplish heat transfer. As such, the furnace MA-5-P does not operate as an "Indirect Heat Exchanger", and consequently is not a "Fuel Burning Unit" as these terms are defined in the rule; therefore, furnace MA-5-P is not subject to the SO₂ weight emission standards in 45CSR§10-3. Standards for manufacturing process source operations are specified in 45CSR§10-4. The furnace MA-5-P is a "source operation" as defined in 45CSR§10-2.19. since it is the last operation in a manufacturing process preceding the emission of air pollutants which operation results in the conversion of the process materials into air pollutants and the furnace is not an air pollution abatement operation. The applicable 2,000 ppmv is already included in the Title V permit as condition 5.1.3. By including MA-5-P in the heading of section 5.0 this condition is applied to the furnace.

45CSR13 – Permit No. R13-1646A. This Title V minor modification incorporates the limitations, standards, and other applicable requirements authorized by NSR permit R13-1646A. With the NSR permitting of the new tip-up furnace, the NSR permit format has been updated. Based upon the permitted changes, revisions have been made in the operating permit in the following sections and conditions:

- Section 1.1. – The equipment table was updated with the new furnace emission unit MA-5-P.
- Section 1.2. – The NSR permit alphabetic suffix and issuance date were revised.
- Condition 3.3.1. - The citation of authority was revised.
- Section 5.0 Heading – The new furnace emission unit ID MA-5-P was added.

- Condition 5.1.1. - The underlying condition number was revised in the citation of authority. Underlying requirement 45CSR§7-3.2. is added to reflect the requirement in the underlying permit.
- Condition 5.1.3. - The underlying requirement that applies to MA-5-P is added to the citation of authority.
- Condition 5.1.4. - The emissions limits for MA-4-P are retained, and the limits for MA-5-P are now included. The streamlining note is revised since compliance with the NSR permit PM limit ensures compliance with 45CSR§7-4.1. Therefore, underlying requirement 4.1.6. for 45CSR§7-4.1. is also added to the citation of authority. The previous underlying condition number is also revised in the citation of authority. Since the requirement specifically mentions the emission units there is no need to refer to them in the citation of authority. Therefore, the MA-4-P is stricken from the citation of authority.
- Condition 5.1.5. - The natural gas consumption limit for MA-4-P is retained, and the limit for MA-5-P is now included. The underlying condition number is revised in the citation of authority. Since the requirement specifically mentions the emission units there is no need to refer to them in the citation of authority. Therefore, the MA-4-P is stricken from the citation of authority.
- Condition 5.1.6. - The process rate limit for MA-4-P is retained, and the limit for MA-5-P is now included. The underlying condition number is revised in the citation of authority. Since the requirement specifically mentions the emission units there is no need to refer to them in the citation of authority. Therefore, the MA-4-P is stricken from the citation of authority.
- Condition 5.4.1. - The requirement to monitor the amount of natural gas fired is revised to include MA-5-P and reflect the underlying permit requirement. The underlying condition number is revised in the citation of authority. Since the requirement specifically mentions the emission units there is no need to refer to them in the citation of authority. Therefore, the MA-4-P is stricken from the citation of authority.

There are other requirements in R13-1646A that are not already in the Title V permit as those described above. Therefore, the following conditions are added to the modified Title V permit:

- Condition 5.1.15. - This requirement is applicable to the furnaces MA-4-P and MA-5-P; therefore, it is written in section 5.0 of the permit.
- Condition 5.2.2. - This requirement is applicable to the furnace MA-5-P; therefore, it is written in section 5.0 of the permit.
- Condition 5.4.4. - This requirement is applicable to the furnace MA-5-P since it is the recordkeeping for the monitoring in condition 5.2.2. that applies to MA-5-P; therefore, it is written in section 5.0 of the permit.

There are requirements in R13-1646A that are **not applicable**:

- Requirement 4.1.8. - This requirement regarding operation and maintenance of air pollution control equipment is not applicable because the furnace MA-5-P does not utilize such equipment. The requirement is boilerplate that is currently included in most, if not all, NSR permits. However, in this case, it is not applicable and would provide no permitting value and could lead to confusion if included in the Title V permit.
- Requirement 4.3.2. - This requirement to record maintenance of air pollution control equipment is not applicable to the furnace MA-5-P and is not included in the Title V permit for the same reasons detailed above for non-applicable requirement 4.1.8.

- Requirement 4.3.3. - This requirement to record malfunctions of air pollution control equipment is not applicable to the furnace MA-5-P and is not included in the Title V permit for the same reasons detailed above for non-applicable requirement 4.1.8.

Miscellaneous Revisions

- Condition 3.1.3. – The citation of authority is revised to reflect current Title V permit boilerplate.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the tip-up furnace MA-5-P due to the following:

45CSR2 – To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers. This rule establishes emission limitations for smoke and particulate matter which are discharged from fuel burning units (45CSR§2-1.1.). For the purposes of this rule, a "Fuel Burning Unit" includes any furnace that combusts fuel to provide heat by indirect heat transfer (45CSR§2-2.10.). An "Indirect Heat Exchanger" is a device that heats a heat transfer medium (45CSR§2-2.14.). According to the application Attachment L, rather than utilizing a heat transfer medium, the natural gas-fired burners fire directly on the load to accomplish heat transfer. As such, the furnace MA-5-P does not operate as an "Indirect Heat Exchanger", and consequently is not a "Fuel Burning Unit" as these terms are defined in the rule; therefore, furnace MA-5-P is not subject to 45CSR2. This determination has not been added to permit section 3.7.2. because 45CSR2 does apply to certain sources at the facility (e.g., condition 4.1.1.).

40 C.F.R. Part 64 – Compliance Assurance Monitoring (CAM). According to the application, no air pollution control device will be utilized for the tip-up furnace MA-5-P. Additionally, potential uncontrolled emissions of all regulated air pollutants emitted from furnace MA-5-P are less than their respective major source thresholds. Since the furnace does not meet the applicability criteria in 40 C.F.R. §§64.2(a)(2) and (3), CAM does not apply to furnace MA-5-P. This determination has not been added to permit section 3.7.2. because 40 C.F.R. Part 64 does apply to certain sources at the facility (e.g., condition 6.2.3.).

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: Not applicable for minor modifications.

Ending Date: N/A

Point of Contact

All written comments should be addressed to the following individual and office:

Denton B. McDerment, P.E.
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Division of Air Quality
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Charleston, WV 25304
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Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Response to Comments

No comments were received from U.S. EPA regarding the proposed permit revision.